



DVD-R/RAM Drive



## Installation Manual

**BEFORE CALLING PACIFIC DIGITAL TECHNICAL  
SUPPORT, PLEASE COMPLETELY READ THE  
INSTALLATION SECTION OF THIS MANUAL**

## Thank You

Thank you for purchasing a Pacific Digital product. In this manual, you will find information designed to help you understand the capability of your new DVD-R/RAM drive, as well as a step-by-step explanation of how to install your product.

### **PACIFIC DIGITAL TECHNICAL SUPPORT**

Our technical support staff is ready to assist you with any problem you may have with your PDC product. Our hours of operation are Monday – Friday 7:00 AM to 6:00 PM Pacific time.

You can contact Pacific Digital Technical Support at:

E-Mail: [Support@PacificDigital.com](mailto:Support@PacificDigital.com)  
Internet: <http://www.PacificDigital.com>  
Telephone: (949) 477-5715 or (888) 999-0732  
Fax: (949) 252-9397

### **TROUBLESHOOTING GUIDELINES**

Having trouble with your PDC Drive? Want to know more about how it works? Check the list of common questions provided in this manual; you may find the answers you need. If you don't, or if the problem persists, contact PDC Technical Support.

### **CALLING PDC FOR ASSISTANCE**

If you need to get in touch with the PDC Technical Support Department, please have the following information on hand when you call:

Your Customer ID or Name, Address and Phone Number.  
Your PDC Product Model and Serial Number.  
Your Computers CPU, RAM, and Hard drive.

For more information about our products go to our website at  
<http://www.PacificDigital.com>

## Copyright, Trademarks, etc.

**Copyright 1999-2002, by Pacific Digital Corporation (PDC).** All rights reserved. No part of this manual may be reproduced in any form or by any means (including electronic storage and retrieval or translation into a foreign language) without prior agreement and written consent from PDC as governed by United States and international copyright laws.

It is the policy of PDC to improve products as new technology becomes available. PDC reserves the right to revise this manual and make changes to its content at any time, without obligation to notify any person or entity of such revisions. While great care has been taken in preparing this manual and the products it describes, PDC cannot be held responsible for any errors or omissions that the manual or products may contain or exhibit. Any alteration or misuse of these products voids any expressed or implied warranties.

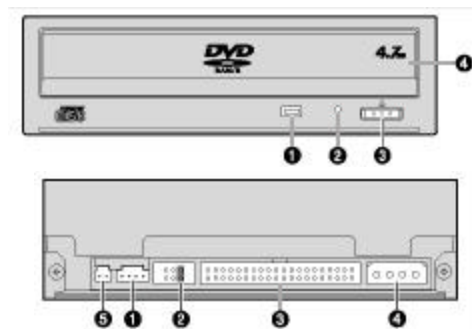
“Windows” and “Windows NT” are registered trademarks of Microsoft Corporation (U.S.) in the U.S. and other countries.

Pacific Digital Corporation herewith declares that it will not be liable in any way for any loss of data or any other damage, whether direct or indirect, caused by the operation or malfunctioning of this product. Backup important data to protect it from possible loss.

## **Table of Contents**

<b>Parts and Functions</b>	<b>05</b>
<b>Settings and Connections</b>	<b>06</b>
<b>Connecting the DVD/R-RAM</b>	<b>07</b>
<b>Connecting the Cables</b>	<b>08</b>
<b>Inserting a DVD-RAM or DVD-R</b>	<b>09</b>
<b>Installing the Software</b>	<b>10</b>
<b>License Agreement</b>	<b>11</b>
<b>License Agreement</b>	<b>12</b>
<b>Accessing DVD-RAM discs recorded on a DVD-VIDEO Recorder</b>	<b>13</b>
<b>Handling Discs</b>	<b>14</b>
<b>Handling Discs (non-cartridge)</b>	<b>15</b>
<b>Handling Discs (DVD-ROM, CD-ROM)</b>	<b>16</b>
<b>Drive Specifications</b>	<b>17</b>
<b>Rear View &amp; External Dimensions</b>	<b>18</b>
<b>Troubleshooting</b>	<b>19</b>
<b>Notes and Information</b>	<b>20</b>

## Parts and Functions



### Front Panel

#### 1. Operation indicator lamp

Off:	No disc inside.
Steady Green:	Disc inserted in DVD-R/RAM drive.
Steady Orange:	Recording, playback or tray opening/closing.
Flashing Green:	Error.

#### 2. Manual eject hold

Used to manually eject the tray in an event when it will not open normally.

#### 3. Open/close button

#### 4. Shutter or tray

### Rear Panel

#### 1. AUDIO output connector

For connecting the internal audio cable

#### 2. Jumper connector

For setting the DVD-R/RAM to Master/Slave/Cable Select

#### 3. IDE connector

For connecting the internal IDE cable

#### 4. Power supply connector

For connecting the power cable from the computer

#### 5. Digital AUDIO connector

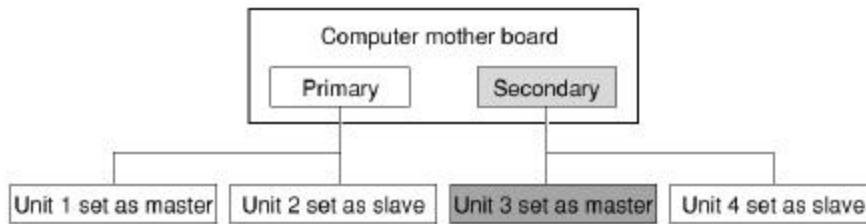
## Settings and connections

### Connection example

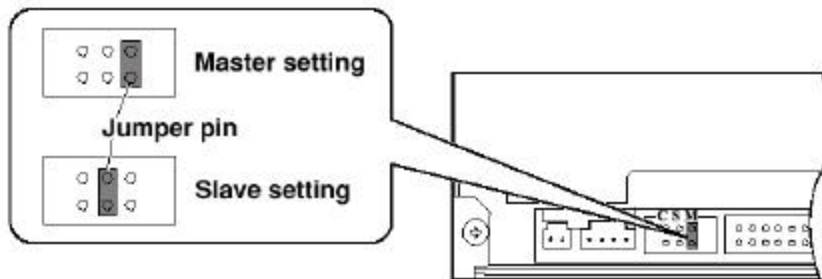
Computer motherboards have two IDE interface connectors: a Primary and a Secondary.

You can connect a total of four units to the motherboard: one Master and one Slave IDE unit to the Primary and Secondary connector.

We recommend connecting the DVD-R/RAM drive as Secondary Master.



**NOTE:** This unit is set as a Master at the time of shipment.

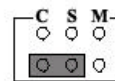


**NOTE:** Some Compaq, HP, or Dell computers use Cable Select which is the third set of jumpers on the left side. Please refer to your Computer Manual if you have one of these types of computers.

### Caution:

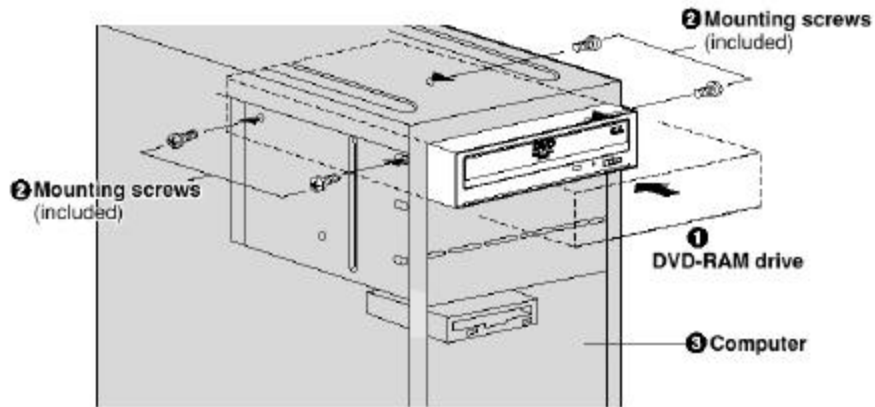
Do not mount the jumper pin sideways or in any position other than specified. This can cause the unit to malfunction.

**NOT allowed**



## Connecting the DVD-R/RAM

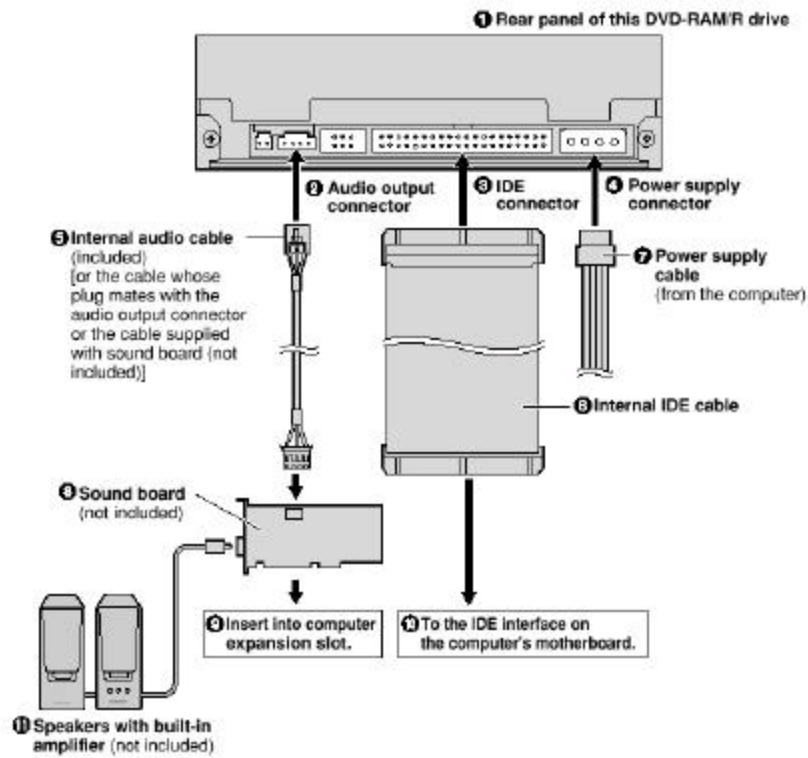
Mounting screw holes are located in four places on the right and left panels of the DVD-R/RAM drive. When securing the DVD-R/RAM drive into a computer secure the DVD-R/RAM drive firmly in place with the four mounting screws included in this kit:



**NOTE:**

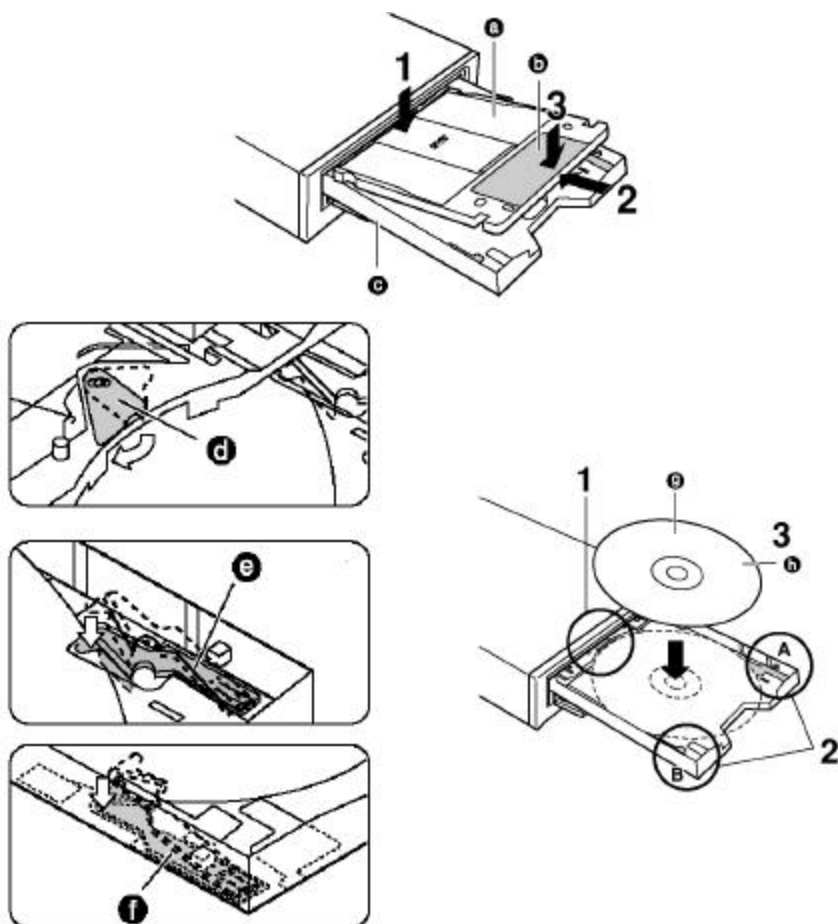
Only use the screws included in the DVD-R/RAM kit. (Using screws with a different length or diameter may damage the DVD-R/RAM drive.)

## Connecting the cables





## Inserting a DVD-RAM or DVD-R



DVD-RAM discs	DVD-R discs
<p>A: DVD-RAM discs B: Label C: Tray</p> <p><b>1. Insert so the label-side is facing up.</b>  <b>2. Push the DVD-RAM about 2cm towards the DVD-R/RAM drive.</b>  <b>3. Press gently so the DVD-RAM disc sits firmly on the tray.</b></p>	<p>D: Stopper E: Disc Holder A F: Disc Holder B G: Label H: DVD-R</p> <p><b>1. Fold away the stopper.</b>  <b>2. Lower the disc holders.</b>  <b>3. Load the disc inside the disc guides.</b></p>

## Installing the software

The following programs are supplied on the DVD Burner Bundle and Format disc.

### 1. Format / Driver Software

**The Driver Software must be installed.**

All of the software programs listed below are installed when you run the installation program.

#### **Driver Software**

A program that allows the DVD-R/RAM drive to be used in a Windows? environment, and to allow reading from and writing to UDF format discs.

#### **DVDForm – (DVD Formatting Software)**

Software to format DVD-RAM discs in UDF or FAT.

#### **DVDRgn – (DVD Region Setting Software)**

Allows you to set the region number for DVDs.

### 2. DVD Burner Bundle

**Install applications as you require.**

#### **NeoDVD – (DVD Burning Software)**

Designed specifically for the home camcorder user, **NeoDVD** standard offers a complete, real-time, end-to-end software solution for camcorder users to easily capture, edit, compress, author and burn DVD files onto their recordable CD and DVD drives. With no video processing experience, the average camcorder user can quickly and easily create broadcast-quality videos right from their home PC.

#### **WinDVD – (DVD Player Software)**

WinDVD uses the power of the PC to bring DVDs to life. WinDVD combines the best picture and sound with advanced features only possible on a PC - time stretching lets you watch movies faster with natural audio, thumbnail bookmarks to instantly find your favorite scenes, fully-adjustable zoom and pan, and much more.

#### **Mupee – (DVD Editing Software)**

Mupee autoProducer is the world's only smart automatic video editing solution. You can now capture and create compelling video without the learning curve and long hours needed for traditional video editing tools.

## License Agreement

PLEASE READ THE TERMS OF THIS AGREEMENT CAREFULLY BEFORE INSTALLING OR USING THE neoDVD STANDARD SOFTWARE.

YOUR RIGHT TO USE THE SOFTWARE IS GOVERNED BY THE TERMS OF THIS AGREEMENT. INSTALLING THE SOFTWARE INDICATES YOUR ACCEPTANCE OF THE TERMS OF THIS AGREEMENT. IF YOU DO NOT ACCEPT THESE TERMS, DO NOT INSTALL THE SOFTWARE.

This is a legal agreement ("Agreement") between you, the end user, and MEDIOSTREAM, INC. ("MedioStream"), a California corporation with its principal place of business at 2107 N. 1<sup>st</sup> St. Suite 530, San Jose, California 95131, which covers the neoDVD software developed and distributed by MedioStream ("Software") and its accompanying documentation ("Documentation"). The term "you" in this Agreement refers to the initial purchaser of the Software.

1. **LICENSE** This is a license agreement and **NOT** an agreement for sale. MedioStream licenses you to use the Software and Documentation only as permitted by this Agreement, and it retains all rights not expressly granted to you exclusive, nontransferable and limited right to install the Software onto the hard drive or other mass storage device of two (2) computers and use the Software and Documentation on those computers solely for your personal non-commercial use. You may install, register and use a maximum of two copies of the Software. You may make an archival copy of the Software and Documentation for back-up purposes, provided that such copy contains all of the original copy's proprietary notices and is kept in your possession, but you may not otherwise copy or distribute the Software or Documentation in any form or by any medium.

2. **TERM; TERMINATION** The license granted in this Agreement shall continue indefinitely until terminated by you or by MedioStream. You may terminate this Agreement at any time by destroying the Software and Documentation. This Agreement, and any and all rights provided to you in connection with the Software, shall automatically terminate if you fail to comply with the terms of this Agreement. Upon any termination of this Agreement, you shall cease using and shall destroy the Software and Documentation, and all copies of any parts thereof. All sections of this Agreement, other than Section 1 ("License"), shall survive termination of this Agreement.

3. **OWNERSHIP; INTELLECTUAL PROPERTY** All right, title, and interest in the Software and Documentation, and all patents, trademarks, copyrights, and all other intellectual property and other proprietary rights applicable thereto, shall at all times remain solely and exclusively with MedioStream. You shall not (nor shall you permit any third party to) take any action inconsistent with such right, title, and interest. Unauthorized reproduction of the Software or Documentation is strictly prohibited by United States copyright and other laws and by international treaties, and may subject you to civil and/or criminal penalties.

4. **LIMITATION ON USE** You represent and warrant to MedioStream that you shall not.  
Sell, rent, lease, sublicense, grant a security interest in, or otherwise transfer or distribute any copies of the Software or Documentation to others;  
Offer the benefits or services of the Software to any third party, whether such arrangement is in the nature of a service bureau, an outsourcing service, an application service provider or any other similar service or business;  
Modify, customize, or create derivative works based on the Software or the Documentation (i.e. create a new program that incorporates all or part of the Software or Documentation);  
Avoid, circumvent or disable any security mechanism, procedure or protocol. Or any copyright protection, provided or included in connection with the Software;  
Use the Software other than for its intended purpose; or use the Software in a manner that violates any applicable law, including without limitation laws prohibiting the unauthorized copying of copyrighted materials.

In addition, you acknowledge that the Software contains trade secrets of MedioStream. Accordingly, you represent and warrant that you will not modify, translate, reverse engineer, decompile, or disassemble the Software, except to the extent that applicable laws permit you to do so; You agree to indemnify MedioStream and its affiliates, officers, directors, employees and agents for any third-party claims relating to your breach of any of the above representations and warranties.

## License Agreement (Continued)

5. **DISCLAIMER OF WARRANTY** THE SOFTWARE AND DOCUMENTATION ARE PROVIDED "AS IS." MEDIOSTREAM DOES NOT WARRANT THAT THE SOFTWARE WILL MEET YOUR REQUIREMENTS OR THAT ITS OPERATION WILL BE UNINTERRUPTED OR ERROR-FREE. MEDIOSTREAM HEREBY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE SOFTWARE OR THE DOCUMENTATION, INCLUDING THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, ACCURACY, NON-INTERFERENCE AND NON-INFRINGEMENT. THESE DISCLAIMERS OF WARRANTY CONSTITUTE AN ESSENTIAL PART OF THIS AGREEMENT.

6. **LIMITATION OF LIABILITY** IN NO EVENT WILL MEDIOSTREAM OR ITS OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, SUPPLIERS, DISTRIBUTORS OR RESELLERS BE LIABLE TO YOU OR ANY OTHER PERSON FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (SUCH AS DAMAGES FOR LOSS OF GOODWILL, WORK STOPPAGE, COMPUTERE FAILURE OR MALFUNCTION, LOST DATA, LOST PROFITS, LOST BUSINESS OR LOST OPPORTUNITY), OR ANY OTHER COMMERCIAL DAMAGES OR LOSSES, EVEN IF MEDIOSTREAM HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES, COSTS, LOSSES OR CLAIMS. IN NO EVENT WILL MEDIOSTREAM BE LIABLE FOR ANY DAMAGES IN EXCESS OF THE AMOUNT YOU ORIGINALLY PAID MEDIOSTREAM FOR THIS LICENSE OF THE SOFTWARE. Some jurisdictions do not allow exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

7. **LAWFUL USE OF SOFTWARE ONLY** you agree that you shall not use the Software or Documentation for any unlawful purpose. You agree that you will use, export and re-export the Software and Documentation only in compliance with applicable export control laws and regulations in your jurisdiction, including, if applicable, the then-current Export Administration Regulations administered by the U.S. Department of Commerce.

8. **TAX** you shall be responsible for and shall pay, and shall reimburse MedioStream on request if MedioStream is required to pay, any sales, use, valued added (VAT), consumption or other tax (excluding any tax that is based on MedioStream's net income), assessment, duty, tariff, or other fee or charge of any kind or nature that is levied or imposed by any governmental authority on the Software.

9. **CONFIDENTIALITY** You acknowledge and agree that the Software and Documentation may contain confidential information and/or trade secrets of MedioStream and/or its suppliers. You agree to maintain and protect such confidential information and trade secrets in strictest confidence for the benefit of MedioStream and/or its suppliers, and not the disclose them without express authorization of MedioStream.

10. **GENERAL** This Agreement constitutes the entire understanding between you and MedioStream with respect to the subject matter hereof. It supersedes all prior or contemporaneous oral or written communications, proposals, or representations and warranties and prevails over any conflicting or additional terms of any quote, order, acknowledgment, or other communication between the parties relating to its subject matter. Any change of this Agreement must be in writing and signed by an authorized representative of MedioStream. Nothing in the Agreement constitutes a waiver of the rights of MedioStream under the U.S. Copyright Act of Federal or State law. This Agreement shall be governed by the law of the State of California, excluding its choice of laws provisions. The United Nations Convention of Contracts for the International Sale of Goods is expressly disclaimed. If any provision of this Agreement is determined to be inenforceable or invalid under any applicable law, this Agreement will not be invalid; instead, the unenforceable or invalid provision shall be interpreted so as to best accomplish the objectives of such provision. Any dispute relating to this Agreement or the Software shall be brought only in the federal or state court, as applicable, in Santa Clara County, California, and the parties hereby waive any objection to the jurisdiction of such courts.

**2001 MedioStream, Inc.; All Rights Reserved. MedioStream**

## Accessing DVD-RAM discs recorded on a DVD VIDEO Recorder

When you record onto a DVD-RAM disc with a DVD video Recorder, a DVD video camera, computer software that follows the “Video Recording Standards” developed by the DVD Forum, a folder labeled “DVD\_RTAV”, in which all the relative video recording standard files are stored, is created. **Do not access this folder and the files it contains with a computer.**

Some of the files inside this folder exceed 2 GB. Due to limitations Windows 98, such files cannot be copied and their size may not be displayed correctly. If any of the files are erased or changed, you may not be able to play the video on a DVD video recorder or with the video software for computer.

### NOTE:

The region numbers on the DVD-R/RAM drive must match the region number on the DVD-VIDEO disc.

When this DVD-R/RAM drive was shipped, the region number was set to “1” (LF-D321U) or “2” (FL-D321E) to match the region number on the DVD-VIDEO disc sold in your region. Therefore it is normally unnecessary to change the region number setting. Use the included DVDRgn software to change the region number setting on the DVD-R/RAM drive.



This mark indicates the region number of a DVD-VIDEO disc. It is displayed on the jacket of a DVD-VIDEO disc.

## Handling discs

Data may not be written correctly or data that has already been written may be damaged if these discs are not handled correctly. Incorrect handling may also damage your drive.

Carefully read these instructions and instructions that came with your disc.

We recommend using DVD-RAM discs in cartridges when reading or writing important data.

PDC herewith declares that it will not be liable for any loss of data or any other damage, whether direct or indirect, caused by the operation or malfunctioning of this product. Backup important data to protect it.

### Handling TYPE1, TYPE2, and TYPE4 DVD-RAM discs

#### Handling notes:

Do not touch the disc surface.

Do not drop, bend or place heavy objects on the DVD-RAM discs.

Do not incinerate the cartridge.

#### Preventing loss of information

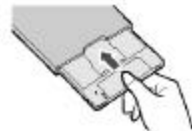
To prohibit writing



Backing up data just as with a hard disk or floppy disk, PDC recommends that you backup data at regular intervals.

#### Keep the cartridges in their cases (when they are not being used)

Remove the cartridge from the DVD-RAM drive and store it in its case.



## Handling discs (non-cartridge)

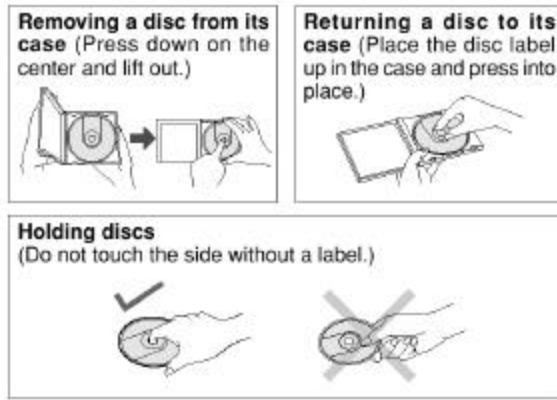
### Handling non-cartridge type DVD-RAM discs and DVD-R discs

#### Handling notes (the \* applies to DVD-RAM discs only)

When removing a disc from its case, press on the center part and lift the disc free. When returning the disc to its case, face the label up and press the disc into place.

Hold discs by the center hole and outer edge.

Do not touch the side used for writing data.



Fingerprints, dirt, dust, and scratches on the recording surface of discs can affect the reading and writing of data.

Write on the label side of the disc only with a soft, oil-based felt pen. Do not use ballpoint pens or other hard writing implements.

Do not attach additional labels or stickers.

To protect discs from dust and scratches, return them to their cases or cartridges when you are not using them.

Do not drop, stack or impact discs. Do not place objects on discs. Operational characteristics can be degraded if undue pressure is applied to discs.

\* Use the write-protect setting to protect your data.

\* You cannot write on 2.6 GB DVD-RAM discs (LM-DB26) removed from TYPE2 cartridges. To write on them, return to their cartridges.

Insert non-cartridge discs the same way as you would insert CDs or DVD-ROM discs.

## Handling discs (DVD-ROM, CD-ROM)

**Handling DVD-ROM, CD-ROM and other CD/DVD discs.**

**Do not place in the following locations:**

Hot or humid locations or where they will be exposed to direct sunlight.

Locations susceptible to significant differences in temperature.

**Handling notes:**

Do not soil or damage them.

Do not drop or bend them.

Do not write on or adhere labels to them.

**How to remove a disc from its case**

Refer to page 16.

**How to place a disc in its case**

Refer to page 16.

**How to hold a disc**

Refer to page 16.

**What to do when a disc is dirty**

Wipe the disc using a soft lint-free cloth, which has been dipped in distilled water, and then wipe with a dry lint-free cloth. The disc must be wiped from the inside towards the outside.





## Drive Specifications

Capacity:	4.7 GB / 9.4 GB DVD-RAM (rewritable) 2.6 GB / 5.2 GB DVD-RAM (rewritable) 4.7 GB DVD-R General Use (write-once)
Data Transfer Rate (IF Interface):	Ultra DMA Mode 2 : max. 33.3 MB / s PIO Mode 4: max. 16.6 MB / s
Write Data Transfer Rate:	4.7 GB DVD-RAM: 1,385 KB with verifying 2.6 GB DVD-RAM: 690 KB with verifying 4.7 GB DVD-R: 1,385 KB with verifying
Read Transfer Rate:	DVD-RAM (4.7 GB) : 2,770 KBps (2x) DVD-RAM (2.6 GB) : 1,385 KBps (1x) DVD-ROM: 3,438 KBps - 8,310 KBps ( Max 6x) CD-ROM / CD-R: 1,520 KBps – 3,600 KBps (Max 24x) CD-RW: 1,800 KBps (Max 12x)
Average Seek Time:	DVD-RAM: 75ms DVD-ROM / DVD-R, CD-ROM: 65ms
Write Compatibility:	4.7 GB DVD-RAM 2.6 GB DVD-RAM 4.7 GB DVD-R (for General Ver.2.0)
Read Compatibility:	CD-DA*1, CD-ROM / XA, Photo CD, Video CD, CD-Extra, CD-R *2 *3, CD-RW *2 *3 at max. 24x, DVD-ROM, DVD-R *2 *4, DVD-Video, at max 6x, DVD-RAM (4.7 GB at 2x, 2.6 GB at 1x)
Buffer Capacity:	1 MB
Power Supply:	12 V / 5 V ? 5 %
Dimensions ( W x H x D ):	146 x 41.3 x 196 mm 5.75" x 1.63" x 7.72"
Weight:	1.1 kg (2.4 lbs. )

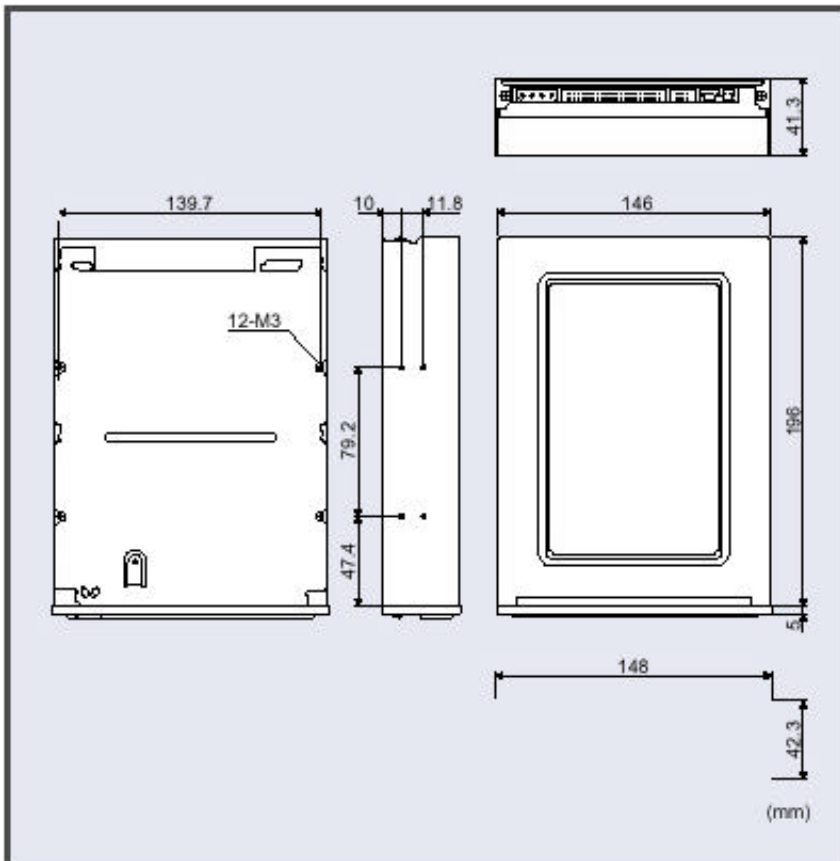
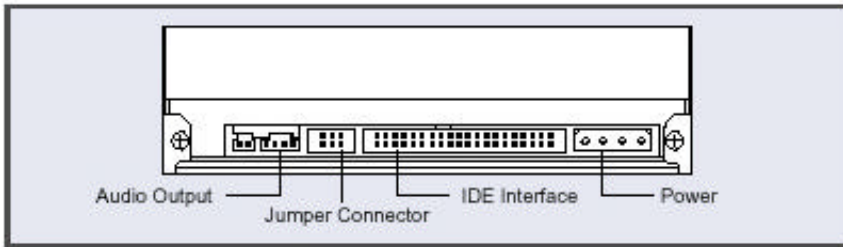
\*1 CD-G not supported.

\*2 Playback of DVD-R, CD-R, and CD-RW may not be fully performed depending on the writing conditions of the discs.

\*3 Supports MultiRead for CD-R and CD-RW.

\*4 Supports discs with a capacity of 3.95GB that are written with the disk-at-once option.

## Rear View & External Dimensions



## Troubleshooting

When this occurs	Possible cause
Tray fails to open:	<p>Is the computer on?</p> <p>Has the power supply cable been connected correctly?</p> <p>Has the label of the media peeled off?</p>
Tray fails to close:	<p>Has the disc been inserted correctly?</p>
Computer fails to work:	<p>Has the drive's master/slave jumper pin been set correctly?</p> <p>Are the drive and computer connected correctly?</p> <p>Has a floppy disk been left inside the computer?</p>
Drive cannot be accessed normally:	<p>Are the drive and computer connected correctly?</p> <p>Is the device driver software installed correctly?</p>
Drive is not recognized in Windows:	<p>Is the device driver installed correctly?</p>
Cannot read or write DVD-RAM disc:	<p>Did you initialize (format) the DVD-RAM disc?</p> <p>Did you access the drive letter assigned to the drive?</p> <p>Did you insert a single-sided DVD-RAM disc with the label side facing up?</p> <p>Is the DVD-RAM disc dirty?</p>
Discs cannot be read:	<p>Did you access the drive letter assigned to the drive?</p> <p>Only supported disc formats can be read.</p> <p>Is the disc inserted correctly so that the operation lamp turns green?</p> <p>Are you using correct software programs for playing discs?</p> <p>Is the disc dirty, scratched, cracked, warped, and written on the surface or is a label put on the disc?</p> <p>Does the driver's region number match the number of the disc you are using?</p>

## Notes and Information

During installation, take down the following information. This information will be needed to contact technical support. You can contact PDC Technical Support at (888) 999-0732 or by fax (949) 252-9397. When calling the Technical Support Department, **MAKE SURE TO HAVE THE FOLLOWING INFORMATION READILY AVAILABLE, BECAUSE IT IS NECESSARY TO RECEIVE TECHNICAL SUPPORT.**

### SUPPLIER INFORMATION

Date of Purchase: \_\_\_\_\_ Invoice #: \_\_\_\_\_

Product Purchased From: \_\_\_\_\_

Seller's Tech Support Phone #: \_\_\_\_\_

### PDC PRODUCT INFORMATION

PDC Part #: U-30-\_\_\_\_\_ PDC Serial #: \_\_\_\_\_

DVD Software (1): \_\_\_\_\_

DVD Software Version (1):  
\_\_\_\_\_

DVD Software (2): \_\_\_\_\_

DVD Software Version (2):  
\_\_\_\_\_

### OTHER INFORMATION

Processor Speed: \_\_\_\_\_

Brand of Computer: \_\_\_\_\_

RAM Size: \_\_\_\_\_

CD-Rom Speed: \_\_\_\_\_



***Pacific Digital***™

**Pacific Digital Corporation (PDC)**, Consumer Products Division  
2052 Alton Pkwy, Irvine, CA. 92606  
[www.PacificDigital.com](http://www.PacificDigital.com)